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ABSTRACT

This paper reports the results of a management study of the effectiveness of middle schools in a large, urban, midwestern public school system. Results of the study illustrate the conundrum that all educational reforms are not complementary, i.e., they are at cross-purposes because they are designed to obtain different outcomes. The two reform agendas studied were site-based management with decentralization of decision making about instructional and curricular change and an intention of improving student achievement as measured on a state criterion-referenced test. The study included 11 middle schools employing 400 teachers, with 91 instructional aides, serving 6,845 students. Two principal investigators and five research assistants from a local university reviewed documents, interviewed personnel, parents, and students, and visited the schools. Curriculum management audit standards developed by L. Frase, F. English, and W. Poston (1994) were used to assess school effectiveness. A number of problems with middle school functioning were found. A major implication of the school-by-school review was that the critical balance between systemwide and school-based responses needed to obtain system-wide objectives was missing. None of the schools used data from student performance instruments to link back to validated school-wide performance measures, and no school had taken the initiative to develop assessment measures beyond the state-mandated testing program. No systematic procedures were in place to monitor curriculum or instruction, and at-risk students were not doing well even in the high performing schools. Minority students received a proportionally higher percentage of disciplinary measures than their white counterparts, and sever curricular inequities were found among the schools. Recommendations are made for systematic planning, a core curriculum, administrator accountability, and better responses to low student performance. (SLD)

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At Cross-Purposes: Evaluating the Effects of Middle-Level Education in a Large Urban School System

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This paper reports the results of a management study of the effectiveness of middle schools in a large, urban, midwestern public school system. The results of the study illustrate the conundrum that all educational reforms are not complimentary, i.e., they are at cross-purposes because they are designed to obtain different outcomes. Most reforms assume that all means are common to desired ends. This study found the opposite to be true.

The two reform agendas at work in the study were: (1) site-based management and de-centralization of decision-making about instructional and curricular change, and: (2) an intention of improving student achievement as measured on a state criterion-referenced test.

De-centralization of decision-making is a common component of school reform. It is based on the logic that the closer one is to the place where differences are produced (acknowledged to be schools and classrooms) the more important decisions regarding those differences should be rendered there. However, when schools determine to use curricular/programs that are not aligned (matched) with the tests that centralized educational authorities have determined to use, test scores reflect parental income and other SES variables instead of the content or delivery of localized curriculum selected. This dilemma is exaggerated by the fact that curricular content selected for tests at the upper grades is cumulative, i.e., knowledge and achievement are produced by more than one year of teaching/learning. One consequence is that while de-centralized decision-making at elementary schools may advance achievement, de-coupling curricular articulation (linkage) between elementary and secondary schools works against improving middle school achievement test scores because the largest part of the curriculum tested at middle schools should be taught/learned at the elementary level. The strategy of de-centralization in curriculum within a school system works against improving test scores at the middle grades.

Background Data

The management study of middle level education included eleven middle schools employing four hundred teachers, ninety-one instructional assistants serving 6,845 students in grades 6-8. The majority-minority balance in the eleven middle schools ranged from a high of 84-16% to a low of 40-60%. The middle school student population of the school district was 21.5% of the total student population.

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The Purposes of the Study

The purposes of the management study were to:

1) determine the status of the middle level educational program as to development and promise of improving pupil performance in grades 6-8 as assessed by the state designed criterion referenced testing program;

2) determine to what extent "all children were learning at high levels;"

3) determine the effectiveness of the existing middle level education approach on relevant educational benchmarks. System officials informed the researchers that the Carnegie Foundation's *Turning Points* (1989) had provided the criteria for middle level educational program development, and

4) formulate recommendations that would lead to the resolution of significant management problems identified in relation to: (a) the middle level educational program as a part of the larger school system, and (b) within the eleven middle schools on a school by school basis.

The Approach to the Management Study

A team of two co-principal investigators and five research assistants from a local university spent one month gathering data, reviewing documents, interviewing school system personnel, students and parents, and visiting all eleven middle schools.

Two sets of management standards were used to assess middle level education. To address the effectiveness issue of middle level education in regard to its relationship to the overall school system, the standards of the curriculum management audit (Frase, English and Poston, 1994) were employed. The curriculum management audit standards pertain to organizational/administrative concepts dealing with control, direction, dispersion of resources, use of feedback to improve operations and measures of context/productivity.

Curriculum Management Audit Standards

Curriculum audit standards focus on effective organizational/administrative practices. They are supported extensively in the research literature from both business and school administration (Hoyle, English, & Steffy, 1998).

Audit Standard 1: Organizational and Administrative Control

This curriculum audit standard is centered on the concept that administrative control exists to improve total system operations. Control is exercised in defining direction, establishing a chain of command, instituting procedures of accountability, creating dispersal formulae for resources, and assessing results which are linked to systematic improvements within localized budgetary constraints. In public schools, the administration performs its tasks within a policy framework established by the Board, a body accountable to its public via the electoral process. Neither centralization nor decentralization changes the fundamental concepts involved, although areas of accountability may shift upward or downward depending upon the extent of delegation involved.

Audit Standard Two: The Clarity and Validity of Direction

Curriculum audit Standard Two deals with systemwide direction. This means that there is a clear policy direction and framework for the educational program. Administrators at all levels need to understand what they are to do and so focus their energies on goal/objective attainment. Such clarity allows careful distribution of sometimes scant resources.

Audit Standard Three: Internal Connectivity and Rational Equity

This audit standard sets an expectation for how programs are created from the identification of systematic need. Furthermore, it assumes that in the process of resource

allocation, those students identified as having greater needs have access to greater resources. This is the concept of equity.

Audit Standard Four: Use of Feedback and Adjustment of Performance

To meet this audit standard, a school system has to have a comprehensive set of assessment/testing vehicles that provide administrators/teachers/parents with three kinds of feedback which show results obtained and which enable all to expect improved efforts to demonstrate achievement gains.

Audit Standard Five: Budgetary Links to Programs and Cost-Benefit Analyses

This audit standard links financial outlays to curricula and programs. It requires programmatic links between costs and results so that inputs can be related to output measures.

An Explication of Criteria from *Turning Points*

The following principles had been adopted by the middle school principals and were used to guide the interviews conducted at the schools.

Principle 1:

The middle school is a place where close trusting relationships with adults and peers create a climate for personal growth and intellectual development.

Principle 2:

Every student is the middle school learns to think critically through mastery of an appropriate body of knowledge, leads a healthy life, behaves ethically and lawfully, and assumes the responsibilities of citizenship in a diverse society.

Principle 3:

All young adolescents have the opportunity to succeed in every aspect of the middle school program, regardless of previous achievement or the pace at which they learn.

Principle 4:

Middle school teachers are knowledgeable about the committed to the young adolescent.

Principle 5:

The school demonstrates a commitment to the importance of health and physical fitness.

Principle 6:

Families and middle schools are allied through trust and respect so that adolescents succeed in school.

Principle 7:

Middle schools and community organizations share responsibility to reach students' success.

Principle 8:

Middle school students experience a quality extracurricular program.

The Carnegie criteria pertain to aspects which Denmark the middle school as distinctive in its purpose and functions from elementary and secondary schools. They center on means not ends such as interpersonal development and relationships, knowledge mastery, scheduling practices, characteristics of middle school instructional staff, connectivity to community and families, and school extracurricular activities.

Results of the Study from the School System Perspective

The results of the study using the curriculum management audit standards as the lens for looking at the functioning of the middle schools within the overall context of the district were as follows:

1. Board policy control was not adequate to provide a coherent framework for institutional or programmatic growth of middle level education

Current Board policies were reviewed to ascertain if the Board had delineated specific goals for middle school or in any way established a framework for the development of middle schools. No statements were found in current Board policies which identified the overarching goals expected for middle schools.

2. Central direction and coordination of middle level education lacked cohesion and focus

The reviewers found that at the time of the study the central responsibility for the definition and direction of middle schools was uncoordinated and lacked focus even though all eleven principals had adopted a middle school philosophy that was presented at a school board meeting. Not only was there no current framework in which middle school programmatic initiatives were designed and implemented, the responsibility for a systemwide focus was diffused. The area administrators had not been charged with leading the development and implementation of a coordinated middle school initiative. Prior to the mid 1990s there was no overall plan for the development, funding, or evaluation of middle level education. In fact, during a previous administration, middle school principals were not permitted to meet together as a group. These practices were changing under the guidance of a new superintendent who initiated a strategic planning effort in the district. At the time of the study, the impact of the strategic planning efforts were beginning to have an impact with building level administrators, but had not yet impacted significant change at the classroom level.

3. The system had failed to improve middle school test performance in the past three years

The district was required to be responsive to a number of different goals for its middle schools and not all of these were mutually compatible. For example, correctives such as district-wide busing should have propelled greater efforts towards central definition of curriculum in order to offset the need for articulation across grade levels and schools caused by side pupil mobility. Between 1990 and 1995 this had not occurred in any systematic way. Since 1995, the district is in the process of developing a comprehensive curriculum. During the two years preceding the study, activities had focused on the design and development of an aligned K-12 Language Arts Curriculum. This document was released during the spring of 1997 and use of the document across the district was at the initial stages at the time of the study.

At the time of the study, the reviewers found that the overall middle school curriculum was not aligned with the district's tested curriculum resulting in socio-economic variables being the dominate predictors of pupil achievement and reducing the impact of school-related variables in improving test scores. Student achievement data was complied relating to NCE (normal curve equivalent) scores in reading, language arts, and math; GPA (grade point average); and students receiving 2 or more Fs during a semester.

Exhibit I

The Match Between SES and ISTEP 6th Grade) Middle Schools

Middle School	Total ISTEP Rank/Score 1995/96	Rank Reading	Rank Language Arts	Rank Math	Free and Reduced Lunch
A	67.8*	1	2	1	9
B	63.6*	3	1	2	10
C	61.9*	4	3	4	7
D	60.8	5	4	3	11
E	60.3	2	5	5	8
F	56.1	7	6	6	6
G	53.4	6	7	7	5
H	50.5	8	8	8	3
I	48.8	10	9	10	4
J	48.1	9	10	9	2
K	42.0	11	11	11	1

* above state 61.8

These data illustrate the following points:

1. The greater the percentage of students on free and reduced lunch (a measure of poverty) the lower the ISTEP score when curricular/test alignment is marginal. An analysis on middle school student in the district showed that meal status accounted for the largest amount of variance (r-square difference = .046) on a multiple regression model predicting total battery score.

2. Of the three middle schools who 1995-96 ISTEP scores were above the state average, all had no more than 30% of their students receiving free and reduced lunch. High test scores are indicative of the wealth level of the students and their families, With the exception of language arts, no examples of strong curricular/test alignment were presented to the reviewers.

3. All middle schools with 40% or more students on free and reduced lunch scored below the state average.

4. Test scores in the district are driven by SES measures more than program or curriculum per se, even though curricular options may serve to attract a particular type of student from higher (or lower) SES backgrounds.

4. Severe curricular inequities existed within the eleven middle schools

The reviewers examined the course number offerings for all middle schools to determine the diversity of courses taught. Courses were differentiated by code regarding level of sophistication (beginning, intermediate, advanced), the type of class (full year daily, semester, daily, full year alternative, etc.) or the textbook used. There was a difference in course offerings ranging from 67 different courses at one middle school to 38 at another producing a range of 29 courses.

5. The use of test feedback on a systemwide basis to improve pupil performance was marginal

For pupil achievement to improve, assessment results must be systematically utilized to alter curriculum and teaching methods. Until the mid 1990s there had been no systemwide use of test results at the middle school level. Central office administrators had relied on a "bottom up" model which exacerbated existing inequities and means that the improvement of pupil performance was left to the administrators and teachers at specific sites. Within the year preceding the study, a district administrator had been assigned responsibilities for providing presentations regarding student achievement. Improving student achievement had become integrated into the development of school improvement plans and these data had become part of the data base used by area administrators in assessing the effectiveness of building principals.

6. There was no plan for the development of middle school education, nor had *Turning Points* been an effective focal point to guide the middle school program

The use of the Carnegie Foundation's Turning Points may have e provided a somewhat useful philosophical framework, but is had not been translated into practice and could only be considered a flat step in the development of a solid planning document.

Perhaps the most interesting finding of this study was that the school system had had to be responsive to the de-segregation of all of its schools. In order to improve pupil performance measures on indices which measure cumulative learning, vertical articulation of the curriculum is a requirement to optimize success. Systemwide pupil busing accelerated patterns of pupil mobility, and the de-centralization of the system to the school level via school based decision-making further eroded vertical articulation. Thus, while the system was successful in attaining some systemwide goals imposed politically, the conditions were created by which it was unsuccessful in pursuing other outcomes. The means to attain one set of benchmarks are not the same for all objectives.

Results of the Study School by School

The major implication in the school by school review was that a critical balance which had to exist between systemwide and school-based responses necessary to attain system wide objectives, i.e., mandatory system wide desegregation and vertical articulation to maximize pupil achievement and locally based initiatives was missing.

1. No middle school used data from pupil performance instruments to link back to validated school-wide performance measures

2. No middle school had taken the initiative to develop assessment measures beyond the state mandated testing program. No school based unique objectives were being formally assessed

3. No systematic procedures were in place to systematically monitor curriculum or instruction

4. At-risk students were not doing well even in higher performing middle schools (as measured by state tests)

5. Minority students received a proportionally higher percentage of disciplinary measures than their white counterparts

6. Staff development had neither been focused nor effective

7. Severe curricular inequities existed among the middle schools. One school had eight foreign language offerings compared to one for another.

Significant Finding

The school by school comparison indicated that the Carnegie Foundation's *Turning Points* is a dated statement for the purpose of middle level education. It dwells on the exploratory and transformation aspects of middle level education. While some of these priorities remain valid, the expansion of statewide high risk assessment practices has placed renewed emphasis on the academic mission of middle level education.

Recommendations

The management study concluded with four system wide recommendations for improvement and eight recommendations which pertained solely to the middle schools in the system.

Systemwide Recommendations

Recommendation 1. Develop a Systemwide Plan for Middle School Development and Provide Central Administrative Support and Direction for its Implementation.

Recommendations to the Board of Trustees

1.1. Develop and adopt a policy regarding a mission statement for middle-level education which states what is unique and desired for the district's middle schools.

1.2. Charge the administration with the responsibility to develop a five-year action plan to bring all middle schools into compliance with the overall mission and the general characteristics desired of them. Formally adopt the plan and link it to budget development and resource allocation.

Recommendations to the Superintendent of Schools

1.3 Assist the Board of Trustees in completing # 1.1 and # 1.2 above.

1.4 Assign area administrators with an overall leadership responsibility of developing, implementing, and reporting on the progress of middle-level education and of developing the necessary budgetary linkages to support them.

Recommendation 2: Create a Central Academically Rigorous Core Curriculum for All Middle Schools Which Is Aligned to Key Local, State, and National Measures of Pupil Performance

Recommendations to the Board of Trustees

2.1. Adopt a policy which requires the creation of a common academic core curriculum to be put in place in all middle schools.

2.2. Adopt a policy which requires that the common academic core reflect an optimal alignment with tests and measures in use and be an important criterion in textbook adoption. The academic core should include: language arts, mathematics, social studies, science, foreign language, and computer literacy.

Recommendations to the Superintendent of Schools

2.3. Assist and recommend to the Board of School Trustees the definition of a common academic core curriculum for all middle schools.

2.4 Provide the necessary resources to ensure alignment of the academic core to selected tests and texts.

Recommendation 3. Charge the Area Administrators with Accountability For Monitoring Alignment, Test Performance e and Recommending Systemic Responses to Schools with Large Percentages of Low Performing Students

Recommendation to the Board of Trustees

3.1. Upon recommendation of the Superintendent, create a system of measured responses to chronic low pupil performance patterns.

Recommendations to the Superintendent of Schools

3.2 Develop plans for the area administrators to monitor systemwide alignment and test performance.

3.3. Develop a set of criteria and responses for dealing with schools with large numbers of students who do not meet state standards.

Recommendation 4: Redefine and Implement a Plan for Middle School Instructional Diversification That Is Centered on Student Learning Styles, Curricular Objectives, And Applicable/Selected Test-Performance Measures

Middle School Recommendations

The recommendations listed here were specific for the middle schools. These school by school recommendations pertained to the linking of planning to pupil outcome measures, an examination of curricular inequities, improved pupil monitoring procedures, the development of a wider range of curricular alternatives, focused staff development and the restructuring of low performing middle schools.

Recommendation 1: Planning Processes Should Be Linked to Measures of Pupil Achievement

Recommendation 2: Expand the Breadth of the Curriculum Formally Examined

Recommendation 3: Define and Implement Systematic Pupil Performance Monitoring Procedures

Recommendation 4: Design and Implement Systematic Curricular and Learning Alternative for At-Risk Students

Recommendation 5: Re-Examine School Disciplinary Providers/Referrals to Ensure Fairness

Recommendation 6: Focus Staff Development on Improving Instructional Delivery and Enhanced Achievement by Young Adolescents

Recommendation 7: Examine Curricular Inequities and Take Action to Equalize the Opportunities to Learn

Recommendation 8: Take Steps to Restructure Schools with Large Numbers of Low Performing Students

Follow-up

Following the delivery of the report to the Board, the district strategic planning committee met and added a strategy to the districts strategic plan which states: "We will improve the effectiveness of middle level education and the success rate of all middle school students." An action team was formed and met for several months during the 1997-98 school year. The action team included teachers, parents, administrators, support staff and community leaders. The team met weekly to review data, study the literature base for middle level education, go on site visitations and develop action plans. Six areas were identified for action plan development: achievement, curriculum;, high standards and expectations, responsiveness to young adolescent needs, staff development and community/parent programs. Each action plan identified specific results to be achieved within the next few years and specific actions steps to be taken.

Specific Results for Action Plans

1. Provide for the intellectual and developmental achievement needs of all young adolescents

2. Develop an aligned core curriculum for sixth, seventh, and eighth grade disciplined, to devote the maximum amount of time possible to teaching said curriculum, to test students to determine mastery of said curriculum, and to compile the results

3. Develop a high school credit system for certain courses taken in middle schools

4. Ensure a learning environment that expects high standards for all students

5. Provide high-performing middle schools that are responsive to the developmental needs of young adolescents

6. Recruit staff and volunteers who have an understanding of early adolescence

7. Develop and deliver professional development activities designed to promote awareness of cultural diversity

8. Provide a variety of times and settings to deliver staff development activities

9. Provide staff development activities for specific staff groups including principals, assistant principals, counselors, teachers, teaching assistants, and others

10. Promote and develop proactive working relationships among middle school staff, families, and students.

11. Continue to expand community partnerships and outreach programs designed to promote middle school student growth.

Tentative Conclusions

This study served as a basis for creating some reformulated "reform" admonitions. Among these are:

incongruence between school-site initiatives and systemwide objectives should be identified and resolved. In the case of this study a classic case of "sub-optimization" occurred, i.e., some parts of the system were successful at the expense of other parts and the system itself;

secondary school achievement results are held hostage to congruent elementary school results, and

student achievement should be the ultimate indicator of reform success and not the simple implementation of reform tools or elements.

Implications

Some of the important implications of the study were that reform must occur within a systemwide framework (not merely systemic). Here I note the difference between coherence (ensuring that reforms are complimentary and not contradictory, i.e., parallel) and systemic (reforms are simply consistent according to some conceptual rationale, but may be antagonistic to one another).

Decision-making for determining the success of an innovation (like middle schools) must be based on student achievement. There should be periodic reporting of progress based on disaggregated data (race, gender, SES), and alternative forms of assessment should be used in addition to state driven standardized measures.

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